



Information Brief

Environmental Design: The Physical Environment & School Safety

The physical environment is an important element in the overall safety of a school, contributes significantly to the school's climate, and is a crucial supportive factor in teaching and learning.

CRITICAL ELEMENT ADDRESSED:

Districts and schools ensure that safe, welcoming, accessible physical environments, inviting and conducive to learning, are provided.

INTRODUCTION

Research has shown a direct relationship between the design and use of school facilities and the occurrence of unacceptable and criminal behaviors (*Safe Schools Facilities Planner*, 1998). Good environmental design improves the perception of a school's safety and creates an environment for positive social interaction.

The physical environment can have a dramatic effect on our feelings, behavior, and the way that we view the behavior of others. The design, form, arrangement, and use of buildings and open spaces can either encourage or discourage disruptive and violent behavior. Because of this relationship between environmental design and student behavior, it is wise to examine a school's environment and to modify it in order to increase the likelihood that inappropriate behavior will be diminished.

A well-designed environment can preclude the need to turn a school into a fortress of metal detectors and surveillance cameras. As a matter of fact, such a fortress-like atmosphere can only increase the perception that the school is unsafe. On the other hand, a safe physical environment can optimize the opportunity for students to succeed academically and socially.

"The design and use of the environment directly affects human behavior, which, in turn, influences both fear of crime and opportunities for crime and ultimately affects the quality of life."

- C. Ray Jeffrey

FACTORS THAT AFFECT SAFE ENVIRONMENTS

A school's architecture can contribute greatly to the creation of a safe school environment. The effect on school climate and the overall process of education made by the design, construction, and maintenance of school facilities should not be underestimated. Naturally occurring features of terrain also provide opportunities to enhance safety.

In addition to the architectural design of school facilities and features of the landscape that surrounds these facilities, other features of the physical learning environment also impact on student behavior and

learning. These include: the organization and use of space, interior decorating, furnishings, and time.

ENVIRONMENTAL AUDITS

A number of instruments (including the one in the "Crisis Management" section of this handbook) are available to school personnel to gather information on the current status of their school environment. Involving students in the conduct and analysis of an audit and the design of solutions to problems increases their sense of pride and ownership in their school. Once the results of the audit are known, simple solutions can often make major differences in the overall climate of safety and learning in schools. In many instances, the problem and solution are obvious, but have gone unnoticed. The structured nature of a formalized audit can change this.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Researcher C. Ray Jeffrey coined the term Crime Prevention Through Environmental Design (CPTED) in his book written in 1971. This concept denoted the "proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life" (*Designing Safer Communities*, 1997).

CPTED is based on three principles: access control, surveillance, and territoriality. Stan and Sherry Carter adapted CPTED for use in school settings. As part of this adaptation, they added three principles: physical maintenance, order maintenance, and activity support. For each of these six principles, the Carters describe three categories of strategies: natural, organized, and mechanical. When these are combined in the most advantageous design to solve or prevent a safety problem, they create a safe environment for the entire school community. Many schools turn first to the mechanical strategies, sometimes called target hardening. These include the use of metal detectors and surveillance cameras. Yet, these measures may be more extreme than is necessary. Implementation of natural strategies is less costly, less obtrusive, and less apt to create a prison-like atmosphere in the school.

Access Control deals with the access to a school campus by students and non-students and addresses the perimeters of school grounds, the entrances and exits to school buildings, and the direction of traffic flows. Landscaping, “wayfinding” systems, signage, control of entrance and exits, fencing, landscaping, lighting, supervision of parking lots and athletic facilities, and policies limiting hours of access are examples of natural access controls. Placing receptionists at key areas provides both opportunities to screen visitors who enter a building as well as surveillance of the activities of students and visitors. Automatic closing devices on gates, locks, and key cards are strategies for target hardening by mechanical means.

Surveillance strategies bring vigilance and necessary supervision to the high risk and remote spaces of a school building. Creating a school site with all areas highly visible and increasing the number of staff in an area can drastically reduce the opportunity for vandalism, theft and physical harm. Stairs and hallways, windows and large assembly areas can be strategically placed for ease of visibility by staff. Lighting enhances visibility. Staffing policy should be designed to expect teachers and all school staff to stand outside classrooms during passing times. Activities can be intentionally planned to take place in the more visible locations of the school grounds. Informal student gathering spaces within sight of adult supervision prevent illicit activities from occurring in off limit areas. Surveillance cameras may be included as target hardening strategies. Interestingly, the Las Vegas Unified School District has one of the most sophisticated and best managed surveillance systems of any public school program in the United States, thanks to the consultative advice of security specialists from local casinos (*Safe Schools Facilities Planner*, 1998).

Territoriality is the use of design elements to delineate public and private space to create a sense of ownership of that space and to send “hands off” messages to potential offenders. People will care for, protect, and respect spaces for which they feel responsible and with which they have identity. Placement of physical features can define a territory. Among these may be student art, landscaping, fencing, and pavement treatments that signal pride and define spheres of influence.

Signage that guides visitors, students and staff to their destinations in the school facility communicates welcome, eliminates confusion, and controls access to private offices within the building. Signs also play an important role in communicating the expectations of the environmental design. Strategic placement of signs, entrances, fencing and landscaping helps to guide users to and from their activities in an orderly manner. Maps provide orientation to those new to the facility. Placing the offices of those in authority in easily accessible and visible locations increases security and facilitates surveillance and communication.

Physical Maintenance of a building is essential. When a school environment is kept clean and in good repair, the system runs smoothly, creating a safe and comfortable place of learning. Timely repair of damaged or worn features lessens work at a later date. Making maintenance a shared responsibility of students, school staff, and maintenance personnel and supporting it with commitment and resources by the school’s administrator enhances the sense of ownership and pride. It also decreases instances of vandalism. Having clear and enforceable sanctions for damaging school property also reduces vandalism.

While landscaping provides good control of foot traffic and creates a pleasing environment, low-maintenance plant materials make the job of upkeep more manageable. Campus clean-up days provide an opportunity for the participation of students and staff in trash and litter removal. A good date to schedule an all-school campus clean up and appreciation of our environment is Earth Day in April.

Order Maintenance contributes to a safe learning environment when expectations of acceptable behavior are made clear in the environmental design. Surfaces can be designed to resist permanent graffiti and measures can be taken to control the incidences of graffiti. A response system should be developed that provides access to an authority figure for assistance.

Activity Support is the planning and strategic placement of physical education and recreational activities to enhance opportunities for natural surveillance, supervision, informal access control, and territoriality. Adjacent residential or commercial neighbors can be used to increase casual surveillance of hard-to-see areas on your school campus. Encourage staff to take a walk or drive around the grounds as part of their daily routines. Enlist the support of parent volunteers to help monitor the campus, and equip them with direct means of communication to assistance.

“No greater challenge exists today than creating safe schools. Restoring our schools to tranquil and safe places of learning requires a major strategic commitment.”

*- Ronald D. Stephens, Executive Director,
National School Safety Center*

OTHER FACTORS IN THE PHYSICAL ENVIRONMENT

When we think of the environmental design of a safe school, we must think about more than the physical architecture of the school. Other factors combine to create an environment that fosters prosocial behavior. Among the factors proven to have impact on student conduct are wall color; lighting; windows; noise control; furniture arrangement, style, and student fit; ventilation; and temperature.

SUMMARY

Providing a safe and nurturing school environment for all students is the common goal among school administrators. Today, they are faced with the fact that a violent situation could occur in their district at some

time, and they need to be prepared with intervention procedures. Although crime in schools is on the decline, crises involving sudden violence in schools are traumatic because they are so unexpected.

The physical environment provides additional opportunities to create and maintain a school setting that gives students the opportunity to learn and grow. Creating safe spaces for learning can be as complicated as starting from the ground up or as easy as simply making your staff aware of the physical boundaries,

limitations and advantages offered by your particular school setting.

The safety of our schools has to take priority in order to generate the setting in which students can flourish both academically and socially. It takes the cooperation of parents, schools, and community leaders to produce and implement plans to end the violence and create a safe and nurturing school environment.

LEARN MORE ABOUT IT:

• **Web sites:**

- The Appropriate and Effective Use of Security Technologies in U.S. Schools: A Guide for Schools and Law Enforcement Agencies. National Institute of Justice. <http://www.ncjrs.org/school/state.html>
- Crime Prevention Through Environmental Design (CPTED): <http://www.arch.vt.edu/crimeprev/>
- Carter and Carter Associates: <http://www.cccpted.com>

- **In this Handbook:** See “*Success4* Critical Elements” and articles on *Violence Prevention*, *Safe Schools*, and *School-Wide Discipline*. In other sections of the manual, please refer to *Early Warning*, *Timely Response*, *Safeguarding Our Children: An Action Guide*, and the *Crisis Management Planning* section. For information beyond the scope of this handbook, see the Resources Section.